SMART LINK™

Tomorrows Technology Today

SMARTLINK-4

"MONITORING SOFTWARE"

INSTALLATION & USER MANUAL

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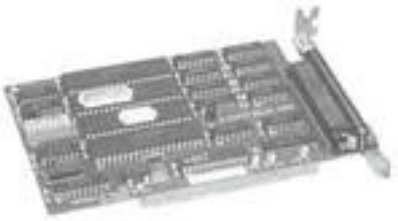
1. 4-PORT SERIAL CARD INSTALLATION

1.1 Equipment List



- 4-Port Serial Extender Card
- Port Cable (Combining 4 Ports to 1 Port)

1.2 Tech Talk

- 4-Port **RS232-C** Serial Card, communication rates from 110 to 115,200 Baud
- **Remote Diagnostics** via Dial-Up Modem
- **POCSAG Output** for **On Site Paging**
- **Dial-Up** (PET Protocol for **Wide Area Paging** or access into host SmartLink Systems)
- **Dial-In** (Incoming PET Protocol), allowing other Paging Systems to send messages via the SmartLink Software
- Supports **DEC VT100** and **WYSE 30** terminal standards (or a Windows terminal running VT100 Emulation)

1.3 System Requirements

- At least one spare **ISA Slot** on the PC motherboard for the 4-Port Serial Extender Card to function. **Computers that only have PCI and AGP slots on the motherboard will NOT be capable of running the 4-Port Serial Card.**
- Ensure that **IRQ5 is free** and NOT used by another device (eg. Internal Modem Card, Sound Card, Network Card etc. that may conflict with the Extender Card using IRQ5).
- Do not change any settings on the 4-Port Serial Card (default settings are correctly configured for SmartLink-4)

1.4 BIOS Setup (Peripherals)

Consult your computer manual for instructions on entering and modifying the computer's BIOS settings as follows:

- Onboard Serial Port 1 (COM1) is set to 3F8h IRQ4
- Onboard Serial Port 2 (COM2) is set to 2F8h IRQ3
- Onboard Parallel Port (Printer Port) is set to 378 IRQ7
- Parallel Port Mode is set to Normal or SPP (Standard)

1.5 Installation Procedure

1) Turn the Computer off, and remove the cover/side panel of the computer case.

2) If you have a static strap then you should put it on. Static electricity may damage sensitive computer components.

3) Insert the 4-Port Serial Card into a spare ISA Slot in the PCs motherboard. Make sure that all pins of the Serial Extender Card are firmly inserted in the ISA Slot. A partial connection may damage the Serial Extender Card.

4) Screw the Card to the computer case to fix it in place and replace the cover on the Computer and turn it on.

5) Ensure the System Requirements and BIOS settings are configured appropriately to conclude the installation of the 4-port Serial Card.

2. RECEIVER (SCU) INSTALLATION

2.1 Equipment List

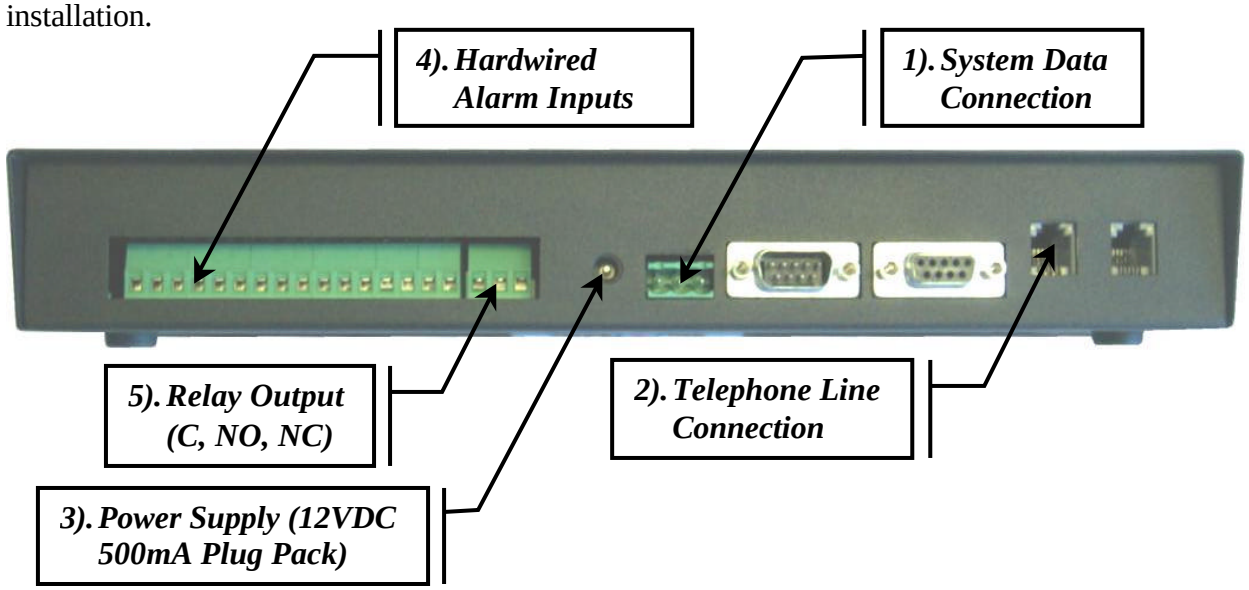
- SmartLink Receiver (SCU)
- Telephone Line Cord
- 12VDC (500mA) Regulated Plug Pack
- Cable (Green connector plug to 25-pin female 'D' Connector)

2.2 Tech Talk

- Monitors Ademco High Speed, Expanded and Contact ID
- Stores and Buffs up to 500 events
- On-board RS232/485 Port for PC Connection
- In-built automatic "Watchdog" circuit
- Single Relay Output (C, NO, NC) which activates on communication failure to the PC
- 16 Hardwired Alarm Inputs (15 & 16 reserved for external AC Fail & Low Battery)

2.3 System Components

The illustration below indicates the relevant connections for the SmartLink Receiver (SCU) installation.


4). Hardwired Alarm Inputs
1). System Data Connection
5). Relay Output (C, NO, NC)
2). Telephone Line Connection
3). Power Supply (12VDC 500mA Plug Pack)

1) System Data Connection

Green connector Plug cable connected to the SmartLink Receiver (SCU) via the DB25 connector on the Serial Extender Card (Port 1 on the 4 Port Card).

Wiring instructions: Connect Pin 1 (Green socket connector) to Pin 2 (DB25)
Connect Pin 2 (Green socket connector) to Pin 3 (DB25)
Connect Pin 3 (Green socket connector) to Pin 7 (DB25)

2) Telephone Line Connection

Telephone line connection to existing telephone socket.

3) Power Supply (12VDC 500mA Plug Pack)

Once the data and telephone connections have been made, plug the 12VDC-plug pack in to a power outlet. The SmartLink Receiver (SCU) requires at least 12VDC "Regulated" 500mA-power source to operate (center pin +ve).

4) Hardwired Alarm Inputs

16 hardwired alarm inputs are supplied via a row of standard screw terminal connectors on the SmartLink Receiver (SCU). These alarm inputs are used to monitor external hardwired alarms such as BMS, Security, Fire, Nurse Call and other miscellaneous hardwired alarm inputs.

- These 16 channels have fixed **Client ID** codes built in, starting from **9901** to **9916** respectively
- Client ID 9915 represents system AC Power Failure and Client ID 9916 represents system Low Battery (used for monitoring Supply Power to system if required)
- An Alarm is generated when the input to the connector's "common ***n***" and "TB ***n***" is Closed*
- A Restore is generated when the input to the connector's "common ***n***" and "TB ***n***" is Opened*

***Where n** represents the channel number (1 to 16)*

5) Relay Output (C, NO, NC)

The single Relay Output is used to provide an external output for interfacing third party systems. The Relay Output is controlled by the computer, which incorporates a communications "Watchdog" system. The relay is in the normally closed position when communication is established with the computer and will change state when communication is lost.

***Note:** SmartLink Software also has an extra "Watchdog" circuit facility incorporated where if communication is lost to the SmartLink Receiver (SCU), the SmartLink Software will automatically page the service pager of the fault.*

2.4 LED Status

LED Number	*LED Colors*	*LED Status*	*Event Meanings*
1	*Red*	*NA*	*NA*
2	*Red*	*NA*	*NA*
3	*Red*	*Fast Flashing*	*PC Communication*
4	*Red*	*Fast Flashing*	*PC Communication*
5	*Red*	*Slow Flashing*	*Modem On*
6	*Yellow*	*ON*	*Incoming Alarm*
7	*Yellow*	*NA*	*NA*
8	*Green*	*ON*	*Communication Failure*
9	*Green*	*NA*	*NA*

***Note**: Both LED 3 and 4 rapidly flash when communication is established*

2.5 Additional Notes

- When making or changing connections to SmartLink Receiver (SCU), check that the SmartLink Receiver (SCU) is **OFF** by disconnecting the plug pack from the power outlet.
- Do not change any settings on the SmartLink Receiver (SCU). This has already been configured and defaulted by the SmartLink Engineers.
- ***For SmartLink-4 Software*** – DIP switch SW1 (inside the SCU) should have switches 1 & 5 **ON** and all other switches **OFF**. The four jumpers (LK7, LK8, LK5, LK6) near the System Data Connector (3-wire green terminal socket) should be set to **RS232 Mode**.
- ***For SmartLink-NT Software*** – DIP switch SW1 (inside the SCU) should have switch 5 **ON** and all other switches **OFF**. The four jumpers (LK7, LK8, LK5, LK6) near the System Data Connector (3-wire green terminal socket) should be set to **RS232 Mode** (If more than 1 SmartLink Receiver (SCU) is used (up to 16 maximum) an RS232 to RS485 converter is required (product number RS232).

3. SOFTWARE INSTALLATION & SETUP

3.1 Equipment List

- SmartLink-4 Software Installation Disk
- Installation & User Manual
- Dongle
- 4-Port Serial Card

3.2 Software Overview

The SmartLink-4 Monitoring Software represents the most advanced computer-based, on-site and remote monitoring paging platforms available in the world today.

- Monitors ADEMCO High Speed, Expanded and Contact ID formats
- **Automatic reporting** and **notification** of a failure of **Exception Reports**
- On-Site (POCSAG) and Wide Area (PET/TAP) **Paging**
- Dynamic pager and **group management**, automatic **workload management** for groups
- **Reminder Messages** and **Booked Calls**
- **Automatic System Failure Communication** (Watchdog Paging)
- **Rostering system** allowing the SmartLink-4 Software to contact various staff groups depending on the source and time an alarm has occurred
- A multitude of **High Level Interfaces** is available, including **Fire**, **Security**, **Nursecall**, **Duress**, **Poker Machines** and **Care Packages**

3.3 *System Requirements*

- Minimum **Pentium 120MHZ CPU** with **32MB of RAM** and **250MB of hard disk space**
- Capable of running **MS-DOS** or Windows **MS-DOS Mode** (i.e. shut down Windows and restart in MS-DOS Mode, NOT a MS-DOS Prompt running within Windows).
- At least **one spare ISA Slot** on the motherboard for the 4-Port Serial Card. Computers that only have PCI and AGP slots on the motherboard will NOT be compatible with the 4-Port Serial Card.
- Ensure that **IRQ5 is free** and NOT used by another device (eg. Internal Modem Card, Sound Card, Network Card or any other cards that may interfere with the Serial Extender Card which uses IRQ5).
- SmartLink-4 Software relies on **serial communications**. Ensure that both primary serial ports (**COM1** and **COM2**) are available. **(Note that USB Ports are NOT compatible with the SmartLink-4 Monitoring Software!)**

3.4 Installation Procedure

1) Insert the SmartLink-4 Software Floppy Disk into the Floppy Disk Drive.

2) Type **a:\install** followed by the **Enter** key.

3) Follow the instructions on the screen:

a) ***SmartLink v4.13 Installation:*** press the **Enter** key to continue.

b) ***SmartLink Registration:*** Requesting you to type in **Owner's Name**, **Company Name** and **Address**. Press the **F10** Key to continue.

c) ***SmartLink Power Up:*** Press the **Y** key (for Yes) followed by the **F10** key to continue if you would like SmartLink-4 to load automatically on boot-up of the PC. To install without this feature choose N (for No).

d) Once the SmartLink-4 Software installation is complete (takes approximately two minutes) press the **Enter** key to continue before removing the SmartLink-4 Software Disk.

4) Connect the **Dongle** on the **Printer (Parallel) Port** of your computer then re-boot to start the Smartlink-4 Monitoring Software for the first time.

3.5 Running the Software

Note: If at the time of installation you chose to have the Smartlink-4 automatically load on boot-up please ignore this section.

For manually loading Smartlink-4 from MS-DOS do the following:

- Type **C:\SMARTLNK\SMARTLNK**(space)**SAVER** (Note: SMARTLINK without the letter I) at the MS-DOS prompt followed by the **Enter** key.

3.6 User Access Level

In order to setup SmartLink-4 you must be in **Maintenance Access Level**:

1) Press the **F5** key from the Main Screen (while no other screens are displayed). You will be presented with the **Select Level of User Operation** dialog box.

2) Use the **Up** and **Down Arrow** keys to highlight **Maintenance Access** and press the **Enter** key.

3) SmartLink-4 will now requesting you for the **Password Authorization**. Type in **POWER** or **MAINTENANCE** and press the **Enter** key to gain Maintenance Access Level privileges.

3.7 SmartLink Receiver (SCU) Setup

1) From the Main Screen, go to **Maintenance**, then **System Configuration**, then **Port** and press the **Enter** key.

2) You will now be presented with the relevant **Port Configuration Screen**. Select any available port (normally SCU is set to Port 1) and press the **Enter** key **twice**. Make sure that the Receiver (SCU) is connected to the appropriate port (e.g. port 1) and that the power is **on**.

3) You will then be provided with a field listing a variety of **Configurations**. Use the **Up** and **Down arrow** keys to highlight **SMARTLINK** and press the **Enter** key.

4) Type in a name for the new interface (e.g. **SMARTLINK SCU**).

5) Use the **Up** and **Down Arrow** keys to highlight the **Baud Rate** option and press the **Enter** key. Then use the **Up** and **Down Arrow** keys to highlight **1200 Baud** and press the **Enter** key. Ensure that the data settings are **Data 8, Stop Bits 1** and **Parity None**.

6) Press the **F10** key to save the settings followed by the **ESC** key **twice** to complete the Smartlink Receiver (SCU) installation and return to the Main Screen.

Note: This process must be repeated for multiple SmartLink Receivers (i.e. you can only use one SmartLink Receiver (SCU) per Port).

3.8 On Site Paging Setup

1) From the Main Screen, go to **Maintenance**, then **System Configuration,** then **Port** and press the **Enter** key.

2) You will now be presented with the relevant **Port Configuration Screen**. Select any available port (normally a Transmitter is set to Port 2) and press the **Enter** key **twice**. Make sure that the Paging Transmitter is connected to the appropriate port (e.g. port 2 of the 4-Port Serial Card) and that the antenna is connected and the power is **on** (failing to connect the Antenna while transmitting can damage the Transmitter).

3) You will then be provided with a field listing a variety of **Configurations**. Use the **Up** and **Down arrow** keys to highlight **POCSAG OUTPUT** and press the **Enter** key.

4) Type in a name for the new interface (e.g. **LOCAL TRANSMITTER**).

5) Ensure the configuration is set to **EXCLUSIVE** for a single local transmitter (select **NON-EXCLUSIVE** if the Smartlink-4 system is intended to control multiple Transmitters and there is the possibility that they may transmit simultaneously).

6) Press the **F10** key to save settings and press the **ESC** key **twice** to complete the On Site Paging installation and return to the Main Screen.

*Note: To Add/Modify Pager Details, refer to **Section 3.11 Pager (or Mobile Phone) Details Setup**.*

Transmitter Types Setup

Go to **Maintenance**, then **System Configuration**, then **System** and press the **Enter** key, for a:

- **2 Watt** Transmitter select **Invert** using the **Space Bar** key
- **4 Watt** Transmitter select **Normal** using the **Space Bar** key
- **5 Watt** Transmitter select **Normal** using the **Space Bar** key

3.9 Wide Area Paging Setup

*To setup a Wide Area Paging service you will require a variety of information such as Phone Number, Password and Serial Data Format (baud rate, data bits, stop/start bits & parity). This information should be provided by your **RCC (Radio Common Carrier)**. For more information, press the **F1** Key **(online Help Tutorial)** and choose Topic **RCC Configuration.***

1) From the Main Screen, go to **Maintenance**, then **System Configuration**, then **Port** and press the **Enter** key.

2) You will now be presented with the relevant **Port Configuration Screen**. Select any available port (normally Wide Area Paging is set to Port 3) and press the **Enter** key **twice**. Ensure that the modem is connected to the appropriate port (e.g. port 3 of the 4-Port Serial Card) and that the power is **on**.

3) You will then be provided with a field listing a variety of **Configurations**. Use the **Up** and **Down arrow** keys to highlight **TAP OUT DIAL UP** and press the **Enter** key.

4) Type in a name for the new interface (e.g. **WIDE AREA PAGING**).

5) Use the **Up** and **Down arrow** keys to change the baud rate. Modems are normally set at **Baud Rate of 1200** with **Data 8**, **Stop Bits 1** and **Parity None**.

6) Set the Protocol to **PET 1**, Message Length to **100** and Messages to **10**.

7) Press the **F10** key to save settings and press **ESC Key twice** to return to the Main Screen.

8) Main Screen, Go to **Maintenance**, **System Configuration, RCC** and press the **Enter** Key.

9) With **RCC 1** highlighted, press the **Enter** key and enter the data provided by your RCC into the appropriate field. Repeat this process if you have more then one RCC (SmartLink-4 can handle up to 32 RCCs) by selecting the next available RCC.

10) Press the **F10** key to save these settings and press the **ESC** key **twice** to complete the installation of the Wide Area Paging and return to the Main Screen.

Note: To Add/Modify Pager (or Mobile Phone) Details, refer to ***Section 3.11 – Pager (or Mobile Phone) Details Setup*****.**

3.10 Clients Setup

Adding a Client

1) From the Main Screen, go to **Maintenance**, then **Alarm Configuration**, then **High Level** and press the **Enter** key (alternatively from the Main Screen, go to **Maintenance**, then **Interfaces** and press the **Enter** key).

2) You will now be presented with the **High Level Interfaces** menu. Choose the port associated with the **SmartLink SCU** (normally Port 1 of the 4-Port Serial Card), and then press the **Enter** key.

3) Use the **Up** and **Down Arrow** keys to select **Add New Client** and press the **Enter** key.

4) You will now be presented with the **View Client Details** screen:

Note: Additional information (eg Medical history ect..) may be added to a client's records later by viewing full client alarm details and pressing the 'S' key. (See Listing Clients for more details).

a) ***CLIENT*** (Client's Name) - enter in the brackets and press the **Enter** key.

b) ***CODE*** (Client ID Code) - allows you to enter in a **Four Digit ID Code** that has been assigned to the Client (SmartLink unit). If you enter in an ID Code that is already in use, you will be presented with a screen telling you that another client is presently using the user ID. You will then be given an option to either overwrite the client's record, or view the client's record that is using that ID. If you want to do neither, choose **Cancel**. If you choose to view the client's record then you will be presented with the client's details, which you can modify if you choose. If you do not wish to modify these details press the **F10** key or the **Esc** key to go back to the SmartLink **High Level Interfaces** menu. If you need to use an ID Code that is already in use, contact the System Administration.

Note: If you choose to overwrite the client's record, all of the client's details will be lost.

c) ***STATUS*** (Client's Status) - press the **Enter** key to show a Sub Menu of **ABSENT** or **PRESENT**. This function allows you to keep track of field units Self Test facilities. If a unit is present, yet there has been no test report detected by the SmartLink-4 Software for a programmed period of time (1 to 30 Days), then the SmartLink-4 Software will automatically generate a Self Test alarm and notify the relevant personnel. Choose either **PRESENT** (enable test reports) or **ABSENT** (Disable test reports) using the **Up** and **Down Arrow** keys followed by the **Enter** key to select your choice.

d) ***ADDRESS*** (Client's Address) – There are three lines that can be used for the Clients Address. Your cursor will start the first line of the address bracket and as you enter data followed by the **Enter** key, the curser will automatically go to the next line.

e) ***SELF TEST*** (Self Test Function) - prevents the scenario of a field unit malfunction going unnoticed. The Self Test function means that a client's alarm must call the SmartLink-4 Software periodically to demonstrate that it is still working. If this is a desired feature add a number between 1 and 30 to define the time period in days (e.g. if a value of 20 is entered into Mrs Jone's Self Test value, then Mrs Jone's SmartLink Medi-Call unit has up to 20 days to dial in before a **Self Test Failure** alarm will occur notifying that the unit is not operating as correctly)

*Note: If a client is entered as **ABSENT**, **no Self Test** will occur, however, all other alarms **will operate as normal**.*

f) **PHONE** (Client's Telephone Number) - enter the Client's Telephone Number and press the **Enter** key.

g) **ROSTER** (For Automatic Paging) – the SmartLink-4 Software can handle up to 99 Rosters, which are displayed in the Sub Menu. These Roasters can be assigned to clients to define who should be paged. Appropriate Roasters can depend on location to the client or by shift work etc. For example, when the alarm is activated for a certain client you may wish to have the closest person paged. If Mrs Jone's room is in the North Wing, then the designated person for the North Wing should be paged, not someone in the South Wing. For SmartLink-4 Software to determine who should be paged, you will need to select a roster. When an alarm goes off, the SmartLink-4 Software will look up which roster the client has been assigned along with the time and whether it is a weekday or a weekend. The software will then automatically page the appropriate person. Refer to section **3.12 Rosters Setup** .

To enter in a Roster, press the **Enter** Key again to show the Sub Menu. Choose the relevant Roster by using the **Up** and **Down Arrow** keys for that client and press the **Enter** key.

Note: Always choose or enter a Roster (e.g. ROSTER #1) even if no Rosters are required.

h) ***CONTACT*** (Client's Contacts) - allows you to enter details of the client's contacts in case of an emergency such as next of kin. Enter in the first contact's name in the first bracket and press the **Enter** key, followed by **Phone** bracket and **Relationship** bracket (a list of options for Relationship can be brought up by pressing the **Enter** key). Repeat this process for all appropriate Contacts. If you only wish to enter one contact, repeatedly press the **Down Arrow** key instead of the **Enter** key until you have reached the first ALARMS bracket.

i) **ALARMS** (Alarm Descriptions) - allows you to enter your own descriptions for 8 different alarms (referred to as zones). These could be panic button, inactivity, smoke detector, bedroom, call point, etc. In the event that an alarm is activated, the SmartLink-4 Software Setup will show exactly which zone has set off the alarm, and what type of alarm it is. If zone 1 is breached, next to that bracket a FLASHING bar will come up describing the urgency/severity of the alarm (i.e. whether it is an Emergency or the alarm has a Low Battery etc). At the top of the screen, next to 'EVENT', it will show what type of alarm it is (i.e. if it is a duress call, zone trouble etc). To enter in a description of an alarm, type in the description in the first bracket and press the **Enter** key. Repeat this process for all required zones to enter their individual descriptions.

5) Press the **F10** key to save, then choose **OK** and press the **Enter** key to conclude the entering of the Client's Details.

Listing Clients

Highlight **List Clients** from the **High Level Interface** menu and press the **Enter** key. You will be presented with a list of Client Names and ID Codes. You can scroll through this list by using the **Up** and **Down Arrow** keys and using the **Enter** key to select. Press the **ESC** key to exit this function.

When viewing a client, either in the **Client List** or under **Display Active Alarms,** press the **'S'** key to bring up the **Review Client Statistics** window. This can now be used to store additional notes and provide further statistical information if required. **NB: Press the F10 key to save entered information.**

Editing Clients

Highlight **Edit Clients** in the **High Level Interface** menu and press the **Enter** key. You will be presented with a list of Client Names and ID Codes. Using the **UP** and **Down Arrow** keys to highlight the Client that you wish to Edit/Modify and press the **Enter** key to select. Edit the appropriate fields as described in ***Adding a New Client***. Press the **F10** key to save, choose **OK** and press the **Enter** key to finish modifying/editing a Client's Details.

Removing Clients

Highlight **Remove Clients** in the **High Level Interface** and press the **Enter** key. You will be presented with a list of Client Names and ID Codes. Use the **UP** and **Down Arrow** keys to highlight the Client that you wish to Remove/Delete and press the **Enter** key. You will now be asked if you are sure. Choose **OK** and press the **Enter** key to Remove/Delete that client from the list.

Viewing Responses

This function allows you to review whether a Client's Med-Call Unit has called in to the SmartLink-4 Monitoring Software during the designated time span. To view this function, highlight **View Responses** from the **High Level Interfaces** menu then press the **Enter** key. Press the **Enter** key again to view a list of the Client Names and ID Codes that have not called in. You can then select a client by using the **Up** and **Down Arrow** keys and press the **Enter** key to bring up the Clients Details if you wish to take further action. Otherwise you can ring any relevant Contacts or Clients displayed on the right hand side of the screen. Press the **ESC** key to return to the **High Level Interfaces** menu.

Setting up ADEMCO

The **Setup Ademco** function allows you to change the alarm names and system names that appear in the SmartLink-4 Software. This means you can change the descriptions to suite your own company's needs and preferences. The alarm name indicates the status of the alarm zone, whether everything is normal or if the alarm is activating. The system name indicates the type of alarm, whether it is for zone trouble, duress etc. By changing the names of the alarms and systems in the **Setup Ademco** option, you are making a global change throughout the SmartLink-4 Software. For example, if you were to change the System name Duress, to read Code Red, every time a duress occurs, SmartLink-4 Software will display Code Red, not Duress.

Highlight **Setup Ademco** from the menu and press the **Enter** key. Use the **Up** and **Down Arrow** keys to highlight the alarm or system name you wish to change and system names and press the **F10** key to return to the **High Level Interfaces** menu.

WARNING: This should only be used when customising of alarm types is required. The default alarm names are based on a standard that will suit the majority of installations.

3.11 Pager (or Mobile Phone) Details Setup

1) From the Main Screen, go to **Modify**, then **Pager Details** and press the **Enter** key.

2) Enter a name for the pager (eg ADMINISTRATION 1) and press the **Enter** key.

3) Enter the **Pager Capcode** (e.g. 1234567) Normally this is the last 7 Digits of the Pager or Mobile Phone Number.

4) Enter the **PBX Number** (used for PABX Communications and default the next available number).

5) Use the **Up** and **Down Arrow** keys to **select the Pager Type**, then press the **Enter** key. Use the **Up** and **Down Arrow** keys to select **TONE ONLY PAGER, NUMERIC PAGER or ALPHANUMERIC PAGER.**

6) Press the **Enter** key **twice** and select the **Network Type**. Use the **Up** and **Down Arrow** keys to select **TRANSMITER** or **WIDE AREA PAGING** and press the **Enter** key.

7) For most situations the **Require time and date stamps**, **Require message stamps** and **Require automatic logging** options should be activated. Use the **Left** and **Right Arrow** keys to change these options between **YES** (activated) and **NO** (deactivated).

8) Press the **F10** key to save settings and then press the **ESC** key to return to the Main Screen to complete setting up the **Pager (or Mobile Phone) Details**.

Modifying Pager (or Mobile Phone) Details

Press the **TAB** key in the **Pager Name** field to display the list of pagers installed in the SmartLink-4 database. If no list appears then no pagers are setup in your database. Use the **Up** and **Down Arrow** keys to highlight the pager you wish to modify, then press the **Enter** key. The Pager Details screen will update to reflect the change. If you make any changes, press the **F10** key to save followed by the **ESC** key to exit to the Main Screen.

Removing Pager (or Mobile Phone) Details

Use the **Up** and **Down Arrow** keys to highlight the pager you wish to remove and press the **Enter** key to select. Alternatively press the **Insert** key to tick off a number of pagers that you wish to delete, and then press the **F10** key when you have completed your selection. SmartLink-4 will prompt you for confirmation before deleting any pagers in the database. Select **OK** and press the **Enter** key to proceed, or choose **CANCEL** if you don't want to remove the pagers. Press the **ESC** key to return to the Main Screen.

*Note: Pressing the **F1** key while viewing the pager details setup will bring up the **Online Help Tutorial** that will provide addition information on the topic of **Installing/Modifying Pager Details.***

3.12 Rosters Setup

*Note: Pager (or Mobile Phone) Details must be entered in first before Rosters can be Setup. Refer to **Section 3.11 Pager (or Mobile Phone) Details Setup.** For Automatic Paging, the Roster must also be enabled (selected) in the Clients Setup. Refer to **Section 3.10 Clients Setup (Adding a Client)**.*

Automatic Paging

1) From the Main Screen, go to **Maintenance**, then **Alarm Configuration**, then **Rosters** and press the **Enter** key.

2) You will now be presented with the **Alarm Roster Schedule Configuration** screen with **ROSTER #1** highlighted.

3) Press the **Enter** key or use the **Up** and **Down Arrow** keys to select a ROSTER (between 1 and 99). Note that the Roster names can be changed or left as default (e.g. ROSTER #1).

4) Use the **Up** and **Down Arrow** keys to highlight **Weekday Operation**. Enter in a time based on a 24-hour clock (i.e. 00:01 to 23:59) and press the **Enter** key. You will now be presented with a Sub Menu. Use the **Up** and **Down Arrow** keys to select pager/mobile phone for **Automatic Paging** and press the **Enter** key. Note that you can use up to four roster shifts to select whom you wish to receive alarm call messages at different times of the day.

5) Press the **F8** key to toggle **Weekend Operation** and repeat the same precudure in the previous step.

6) Press the **F10** key to save and press the **ESC** key **twice** to complete setting up the Rosters and exit to the Main Screen

*Note: Pressing the **F1** key while viewing the pager details setup will bring up the **Online Help Tutorial** that will provide addition information on the topic of **Defining Roster Schedules**.*

3.13 Group Details Setup

*Note: Pager (or Mobile Phone) Details must be entered in first before Rosters can be Setup. Refer to **Section 3.11 Pager (or Mobile Phone) Details Setup**.*

1) From the Main Screen, go to **Modify**, then **Group Details** and press the **Enter** key.

2) You will now be presented with the **Group Details** screen with your cursor highlighting the **Enter Group Name** option.

3) Type in a Group Name (e.g. North Wing Group) and press the **Enter** key.

4) Enter a **PBX Number** (used for PABX Communications and default to the next available number).

5) The **Rotary Group Calling** is used to distribute workload among staff and is set to **NO** as default.

6) The **Require Time and Date Stamp** can be changed using the **Left** and **Right Arrow** keys and is set to **No** as default.

7) The **Require Automatic Logging** is used to generate reports at a later point in time and is set to **Yes** as default.

8) Press the **F10** key to save and press the **ESC** key to complete the Group Details Setup and return to the Main Screen.

*Note: Pressing the **F1** key while viewing the pager details setup will bring up the **Online Help Tutorial** that will provide addition information on the topic of **Installing/Modifying Group Details**.*

4. SOFTWARE USER MANUAL

4.1 Introduction

The SmartLink-4 Monitoring Software is designed to notify people when an alarm is activated, give details of that alarm and whom to contact (refer to **Section 3.10 Clients Setup (Adding a Client)**. To use these functions you will need to enter client and alarm details into the programs client database. Details you will need to provide are:

- Client Name
- Client Code (a four digit ID code for Client reference)
- Whether the client is absent or present (for auto-test reports)
- Client Address
- Self Test (Default 7 Days)
- Client Telephone Number
- Roster
- Contact (Whom to Contact in case of an alarm)
- Alarms (8 different alarm zone descriptions)

A message is sent to the SmartLink-4 Software from the SCU receiver for the following:

- Client Alarms
- Opening Reports
- Closing Reports
- Zone Exclusions
- Zone Trouble
- System Alarms
- Self Tests (failure to test)

4.2 Running the Software

Note: If at the time of installation you chose to have the Smartlink-4 Software automatically load on boot-up please ignore this section.

For manually loading Smartlink-4 from MD-DOS do the following:

- Type **C:\SMARTLNK\SMARTLNK**(space)**SAVER** (Note SMARTLINK without the letter I) at the MS-DOS prompt followed by the **Enter** key.

4.3 Exiting the Software

To quit and exit to MS-DOS simply:

1) Press the **ESC** key from the Main Screen (while no other screens are displayed). You will be presented with the **Password Authorization** dialog box requesting you for the Maintenance Password to exit SmartLink-4 Software

2) Type in **MAINTENANCE** or **POWER** and press the **Enter** key. The SmartLink-4 Software will prompt you for confirmation before exiting. Select **OK** and press the **Enter** key to proceed, or **CANCEL** if you don't want to exit (alternatively press the **ESC** key to return to the Main Screen).

4.4 Quick Reference Keys

Help / Tutorial (F1)

Online help is provided in two forms:

1) From the **Main Menu**, press the **F1** key to bring up the **Context Sensitive Online Help Reference** screen. Use the **Up** and **Down Arrow** keys to Scroll through the current topic and use the **Left** and **Right Arrow** keys followed by the **Enter** key to select **Next** or **Previous** (to browse through topics one at a time), **Topics** (to provide a full listing) **or Exit** (to Main Screen).

2) From the **Current Screen**, press the **F1** key to display a brief description of the current window, menu option or entry field.

Enable Screen Saver (F3)

Press the **F3** key to leave a **Screen Saver** indicating whether the SmartLink-4 software is currently in **Staffed** or **Away** mode of operation.

Change Level of Access - Operator, Administration, Maintenance (F5)

SmartLink-4 operations are divided into three distinct levels of accessibility. Each level provides additional features and operations. Users can change between Access Levels, with the higher access levels providing more complicated facilities.

1) From the Main Screen, press the **F5** Key to display the logon Screen.

2) Use the **Up** and **Down Arrow** keys to Select level of User Operation.

Operator – Allows manual paging, messaging, status of alarms and some statistical analysis. No password is required.

Administration – Access to Maintenance Databases to edit Clients, Rosters, for keeping backups and monitoring System Reports. The default **Password is Administration**.

Maintenance – for installation and setup of SmartLink-4 Hardware and other restricted Database features and configurations. The default **Password is Maintenance**.

3) To return to the most restricted level of access, press the **F5** key, select **Operator Access** and press the **Enter** key (note that no password is required for this).

Toggle Staffed or Away (F6)

Toggling the **F6** key will switch SmartLink-4 between **STAFFED** and **AWAY** modes.

STAFFED - Monitoring Centre must process incoming alarms by pressing the **Enter** key. Computer speaker beeps are enabled.

AWAY - alarms are automatically process and computer speaker beeps are disabled.

Display Last Alarm (F8)

Press the **F8** key to display the last incoming alarm.

Display Version Information (Shift + TAB)

The Version Information or 'About' screen displays the SmartLink-4 Version Number, Copyright, and Memory Available etc. and can be viewed by holding down the **Shift** key and pressing the **TAB** key at the same time.

4.5 Reviewing Active Alarms

This facility allows you to view all the currently active alarm inputs on the system. Each alarm input will display information about the alarm such as its name, how long it has been activated for, whether or not it is urgent and who is currently being contacted.

*Note: Pressing the **F1** key will bring up the **Online Help Tutorial** that will provide addition information on this topic.*

1) From the Main Screen, go to **Display**, then **Active Alarms** and press the **Enter** key.

2) You will now be presented with the **Reviewing Active Alarms** screen. Use the **Up** and **Down Arrow** keys to find an active alarm and press the **Enter** key (or the **Page Up** and **Page Down** keys to select the relevant Alarm Screen).

3) Press the **ESC** key **twice** to exit to the Main Screen.

4.6 Status Symbols

There are 4 symbols in the top right hand corner of the SmartLink-4 Main Screen that provide real time updates on message activity. The **three left most dots** indicate the progress of TNPP, Wide Area and Local Area (On Site) messages respectively. The dots are **Red** if there are messages waiting to be sent; otherwise they are **Green**.

The last icon is a **musical symbol** that represents the status of the Local Area (On Site) Transmitter. A **single Red flash** of the musical symbol indicates that the Transmitter is sending a message; a **Green** musical symbol indicates that the Transmitter is idle and a permanent **Red** musical symbol means that it cannot transmit due to interference.

4.7 Manual Paging

The simplest way of sending messages in SmartLink-4 is to use a Manual Page. Simply select the people you wish to contact, type in the message, and then send the message. SmartLink-4 takes care of the rest.

Manual Keyboard paging allows you to effectively contact key personnel quickly and efficiently. You have the ability to contact any number of personnel simultaneously by simply selecting them from an alphabetically sorted list of pagers, mobile phones and group names.

1) From the Main Screen, Go to **Manual Page** and press the **Enter** key. You will now be presented with the **Manual Page** screen.

2) Press either the **TAB** key or **Enter** key and you will be presented with a list of pager names.

3) Use the **Up** and **Down Arrow** keys to highlight the pager that you wish to page and press the **Enter** key.

4) Type in the **Alphanumeric** message you wish to send to the Alphanumeric Pagers/Mobile Phones or the N**umeric** message you wish to send to specific Numeric Pagers.

5) Press the **F10** key to send the message.

6) Press the **ESC** key to exit and return to Main Screen.

*Note: Pressing the **F1** key will bring up the **Online Help Tutorial** that will provide addition information on this topic.*

4.8 Surveying Sites

It is a good idea to test the coverage of your local area Transmitter. If you use **The Survey Site** screen to send periodic test messages then you can roam around the installation site with a test pager.

Thick steel and concrete, large magnetic and electric fields, and terrain and weather conditions will affect Transmitter efficiency. When you perform a site survey you should pay particular attention to the quality of the messages that you receive on the test pager. If you receive corrupted messages then it is possible that you will have problems sending messages to that particular region.

The **Survey Site** screen is a useful tool for testing coverage of your transmitter. All you do is send out a test message periodically, and then walk around looking for trouble spots.

*Note: Pressing the **F1** key will bring up the **Online Help Tutorial** that will provide addition information on this topic.*

- ***Select Survey Pager/Group***
- ***Specify Time Interval***
- ***Exit Site Survey***
- ***ACTIVATE/DE-ACTIVATE Site Survey***
- ***ADTIVATE/DE-ACTIVATE Test Mode***

1) From the Main Screen, go to **Maintenance**, then **System Configuration**, then **Survey** and press the **Enter** key. You will now be presented with **Survey Site** screen.

2) Press the **Enter** key and you will be presented with a list of pager names.

3) Use the **Up** and **Down Arrow** keys to highlight the pager that you wish to send test messages to and press the **Enter** key.

4) **Specify the Timer Interval** (set to a default of **60** seconds).

5) Use the **Up** and **Down Arrow** keys to highlight **ACTIVATE Site Survey** and press the **Enter** key to begin surveying.

6) When finished testing, press **Enter** key again to **DE-ACTIVATE Site Survey**.

7) Highlight **Exit Site Survey** and press the **Enter** key, then highlight **Exit** and press the **Enter** key again to return to the Main Menu.

4.9 Reviewing the System Status

This facility provides you with important summary information concerning the status of your system such as Installation details, Hardware details, Alarm details and Call details etc. All of these details are updated in 'REAL TIME' to give a true indication of what is occurring.

*Note: Pressing the **F1** key will bring up the **Online Help Tutorial** that will provide addition information on this topic.*

- Build/Version Info
- Pager/Group Summary
- Hardware Summary
- Port Summary
- PBX Summary
- Transmitter Summary
- Call Summary
- Network Summary
- Exit

1) From the Main Screen, go to **Display** then **System Status** and press the **Enter** Key. You will now be presented with the **System Status** screen.

2) Use the **Up** and **Down Arrow** keys to highlight the topic you wish to summarize and use the **Page Up** or **Page Down** keys to summarize the relevant page.

3) Highlight **Exit** and press the **Enter** or **ESC** key return to Main Screen when complete.

4.10 Using the Report Summary

Graph Top Callers (Graphing The Top Callers)

This displays the fifteen most frequently paged people and the fifteen top people who have not responded to alarm activation within the designated time period.

The graphical representation of the top callers takes place in a horizontal graph, where the most frequently called person is displayed at the top and the fifteenth most frequently called person is displayed at the bottom of the graph.

This facility updates in real time so that any calls being made elsewhere on the system will be automatically reflected in the graphical representation of the top callers (if applicable). As the number of calls per person increases, the horizontal axis representing the number of calls made will automatically adjust to suit the largest number of calls made.

Call Statistics (Call Rate Statistics)

This is by far one of the most important facilities provided by the SmartLink-4 package with respect to administration. This facility allows you to review the call rates on a per day basis within a year with a further break down of the calls made for a particular day on an hourly basis.

This facility allows you as an administrator to analyze call trends over days, weeks, months and even a complete year. You also have the ability to view at a glance the average number of calls for the year as well as on an hourly basis. This will allow you to adjust staffing levels according to peak and low periods on a per day basis, based on the daily average or alternatively, on a weekly basis for holiday periods.

Further to this you can also cross tabulate any particular period with the actual calls being sent out via the paging system using the **Report Wizard**.

Report Wizard (Generating Your Own Reports)

By far the most important aspect of the system is the ability to produce a report on any aspect of the system. This facility is known as the Report Wizard. This allows you to produce your own custom designed reports from the history of the calls made on the system. (e.g. a report could be generated for all calls sent to Joseph Banks between a certain time and date generated by the Pressure Valve #10 alarm being activated).

This is by far the most powerful report generator available for any paging product to date. Normally you would have to generate the report yourself by exhaustively searching through the stored logs. This not only consumes large amounts of human resources but also the Paging System would be unavailable for this time.

With SmartLink, you can simply specify the report that you want to generate and the Report Wizard will search the stored logs and produce the report either to be displayed on the screen, printed or saved for later retrieval and at the same time not sacrificing any of your time or the system's time.

Viewing Reports (Viewing a Previously Saved Report)

As described earlier, you have the ability to generate your own custom made reports around any aspect of the system based on the stored logs. As an administrator, you may wish to save these newly generated reports for future reference. If so, by using this facility you have the ability to load and view these reports at any time in the future, and if necessary, print them out.

Print Reports (Printing Reports)

A very important part for any Paging System is the ability to print out reports on various aspects of the system for future reference. SmartLink-4 allows you to print out various standard reports to assist you with administration and maintenance. These reports provide an invaluable 'hard copy' of your system details and more importantly the SmartLink-4 Software reporting capabilities can also allow for these reports to be even further refined. This will give you the ability to print out specific 'parts' of a report and set how many copies that you wish to print.

4.11 Using File Management

From time to time, the system administrator may require maintenance in the form of backing up to restore the system database, as well as clearing the transaction log. This is a very simple task and requires very little time and user interaction. It provides security for your system in the event of computer failure as well as the ability to back up the 'history' of your system for administration purposes. Such a task may be performed on a weekly, monthly or yearly basis.

*Note: Pressing the **F1** key will bring up the **Online Help Tutorial** that will provide addition information on this topic.*

1) From the Main Screen, go to **Maintenance**, then **File Management** and press the **Enter** key. You will now be presented with the **SmartLink File Management** screen.

2) Use the **Up** and **Down Arrow** keys to highlight the desired topic and press the **Enter** key.

- ***Backup*** **-** Backup System Files to Floppy Disk or Hard Disk
- ***Restore*** **-** Restore System Files from Floppy Disk or Hard Disk
- ***Clear Log*** **-** Clear the existing Transaction Log
- ***Clear System*** **-** Clear the System Transaction Log
- ***Export Call Data*** **-** Export Client Call Data
- ***Exit*** **-** Exit the Backup/Restore Facility and return to the Main Menu screen

4.12 Entering Test Data Strings

1) Hold down the **Control** key and press the **Print Screen** key.

2) Enter the data defining the type of alarm followed by the **Enter** key.

An appropriate data string contains a 4-digit client code followed by 8-digits of channel data (or zones) and a type identifier as follows:

[client code] [channel data] [type identifier]

For example: *1111551555557*

Where: *1111 is the client code,*
55155555 is the channel data, and
7 is the type identifier

Pressing the **S** key when an alarm is visible on the screen will bring up additional notes and statistics associated with that particular alarm.

If an alarm is already on the screen and a new alarm is generated, the screen will display ‘new alarm's pending’ and identifies the first alarm by name and the total number of other alarms pending in queue.

The following examples display typical communications between a SmartLink and its monitoring terminal (and radio pagers) as listed below:

a)	1111	15555555	7	Send an alarm on zone 1
b)	1111	35555555	7	Send a "restoral" or cancel the zone 1 alarm
c)	1111	51555555	7	Send an alarm on zone 2
d)	1111	53555555	7	Send a "restoral" or cancel the zone 2 alarm
e)	1111	55555555	7	Send a "manual test call" ("Cancel" button pressed without a previous alarm)
f)	1111	55555555	9	Send an "auto-test call"
g)	1111	15555555	6	A power failure has occurred
h)	1111	35555555	6	Power is restored
i)	1111	51555555	6	Battery is low and approaching its cut off threshold point
j)	1111	11555555	6	Power fail & low battery (Battery may need replacing)
k)	1111	15555555	7	Person attending a previous alarm on zone 1 needs urgent assistance
l)	1111	85555555	7	Alarm on zone 1 and pendant (transmitter) has a low battery
m)	1111	15555555	1	Duress (Emergency) panic
n)	1111	35555555	1	Duress is restored
o)	1111	55555555	2	System switched off (opening)
p)	1111	15555555	3	Zone 1 has been isolated or bypassed
q)	1111	55555555	4	System switched on (closing)
r)	1111	15555555	5	Trouble alarm on zone 1 (Low battery on device)

Note: The above examples use a test client code 1111

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